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Date: 1/30/2003

Weekly update on DTL #1+ #3 ; week 04

Tank-1 cap weld qualification welds were completed successfully; the PMQ field shunting worked well. E-beam welding of prototype Tank-1 endwall tuning weld ring was successfully completed. Tank-3 drift tubes were sent to ESCO for cap weld ring repairs. ESCO started the ring weld repairs on Thursday on these drift tubes, and they have completed all 27. Eighteen Tank-1 diverters have been successfully through the first brazing stage to install copper sleeve/cup. They are currently being fitted to drift-tube bodies. It is projected that the diverter-to-body brazing heat for the first 10 Tank-1 drift tubes will this occur week. The two halves of the iris/RL waveguide for Tank 1 are at CMI for finish machining of the internal features. The temporary Tank-3 iris/RL waveguide that developed the water-to-vacuum leak during final cleaning has been taken to LANL's MST-6 electrochemistry facility. It will be repaired using the electroless nickel process; we expect it to be returned to us in a week. Machining continues on replacement Tank-1 and Tank-3 drift-tube mount "top hats" (material change from 303 to 304 stainless steel). Sixteen Tank-3 and 15 Tank-1 top hats were sent to the plating vendor, Kaehr, for internal copper plating. The first batch of Tank-3 post couplers were sent to ESCO for e-beam welding.

Concerns & Actions: Schedule analysis indicates that the iris/RL waveguide for Tank 1 may be delayed two weeks beyond the required delivery date. Measures are being taken to accelerate the schedule. Because of the faulty cap weld discovered last week, we are closely examining all the bore-tube welds on Tank-3. The cracks will not cause a vacuum leak but may have some RF effects if they are too large. Initial analysis shows that tiny cracks will not be a problem. BPM Drift tube 3-2 cannot be salvaged for the initial tests. We will make a dummy to support the Feb. 28 delivery date and initial RF operation.

Milestone description	Due Date	Number total	Number or % complete	Delta last week
DTL 3 DT's repair	Feb 28 th '03	32	3	-1
DTL 3 DT's rebuilt	Feb 28 th '03	0	0	-4
DTL 3 DT's new built	Feb 28 th '03	1	0	+1
DTL 3 other parts	Feb 28 th '03	100 %	93%	+2%
All DTL 3 parts shipped	Feb 28 th '03	100 %	25% / IPS marker DTLINK51	0
DTL 3 installation	April 16 st '03	100 %	? /IPS marker DTL045	0
DTL 1 DT's repair	April 1 st '03	7	7	0
DTL 1 DT's rebuilt	April 1 st '03	48	0	0
DTL 1 DT's new built	April 1 st '03	4	0	
DTL 1 other parts	April 1 st '03	100 %	79%	1%
All DTL 1 parts shipped	April 1 st '03	100 %	23%/ IPS marker DTL055	0
DTL 1 installation	May 21 th '03	100 %	? / IPS marker DTLINK31	?

At Oak Ridge plastic enclosure with filtered air inlets at each end, has been installed in the tunnel around DTL-3. The vacuum pumps have been reinstalled on DTL-3 in the tunnel and the

tank is again under vacuum. Leak testing will begin later this week. The cooling connections between the DTL-3 manifolds and the facility are being made and are expected to be complete by the end of this week. Initial water cooling system testing is planned for next week.

Table 16 of the recovery plan. Tank 3 milestones

MS	Activity	Complete	Actual
1	Repaired drift tubes, repair welds complete	13-Jan-03	30-Jan-03
2	Post-couplers, tips welded to stems	27-Jan-03	3-Jan-03
3	Waveguide-iris transition, finish machining complete	27-Jan-03	21-Jan-03
4	Top hat finish machining complete	31-Jan-03	
5	EMD drift tube repair complete	5-Feb-03	
6	Post-couplers, finish machining complete	18-Feb-03	
7	Drift tubes, field, vacuum, flow & pressure tests complete	21-Feb-03	
8	All DTL components delivered to ORNL	28-Feb-03	

Table 17 of the recovery plan. Tank 1 milestones

MS	Activity	Complete	Actual
1	Rebuilt drift tubes, 1st 10 diverters machined	7-Jan-03	19-Jan-03
2	Repaired drift tubes, finish machining complete	14-Jan-03	6-Jan-03
3	Post-coupler tips welded to stems	3-Feb-03	
4	Waveguide-iris transition assembly braze complete	7-Feb-03	
5	Top hat finish machining complete	7-Feb-03	
6	Rebuilt drift tubes, all stems welded	11-Feb-03	
7	Repaired drift tubes, final unit delivered to ORNL	17-Feb-03	
8	Low-energy end-wall tuning-ring weld complete	5-Mar-03	
9	All DTL components delivered to ORNL	1-Apr-03	